cen

UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,536	03/24/2004	Kenji Komori	008601-0308600	3780

909   7590   10/30/2007

PILLSBURY WINTHROP SHAW PITTMAN, LLP
P.O. BOX 10500
MCLEAN, VA 22102

EXAMINER
RYMAN, DANIEL J

ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
10/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

Office Action Summary		Examiner	Art Unit	
		Daniel J. Ryman	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>21 June 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-10</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-10</u> is/are rejected.

7)☒ Claim(s) <u>1,2,4 and 6-10</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>6/21/2004</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some *   c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-SB/08)
    Paper No(s)/Mail Date <u>3/24/04; 5/4/04</u>.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Drawings

1.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because each

of reference characters "Processing 1", "Processing 2", "Processing 3", "Processing 4",

"Processing 5", "Processing 6", and "Processing 7" has been used to designate different steps in

Fig. 5 and Fig. 8. For example, "Processing 1" has been used to designate both the step of

obtaining the transmission time T(N) of the packet to be transmitted in Fig. 5 and the step of

Receiving NG in Fig. 8. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are

required in reply to the Office action to avoid abandonment of the application. Any amended

replacement drawing sheet should include all of the figures appearing on the immediate prior

version of the sheet, even if only one figure is being amended. Each drawing sheet submitted

after the filing date of an application must be labeled in the top margin as either "Replacement

Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the

examiner, the applicant will be notified and informed of any required corrective action in the

next Office action. The objection to the drawings will not be held in abeyance.

2.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they

include the following reference character(s) not mentioned in the description: Processing 3,

Processing 7, and Processing 8 (see Fig. 5). Corrected drawing sheets in compliance with 37

CFR 1.121(d), or amendment to the specification to add the reference character(s) in the

description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to

avoid abandonment of the application. Any amended replacement drawing sheet should include

all of the figures appearing on the immediate prior version of the sheet, even if only one figure is

being amended. Each drawing sheet submitted after the filing date of an application must be

labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR

1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and

informed of any required corrective action in the next Office action. The objection to the

drawings will not be held in abeyance.

Specification

3.   The abstract of the disclosure is objected to because it exceeds 150 words. Correction is

required. See MPEP § 608.01(b).

4.   35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear,

concise, and exact terms." The specification is replete with terms which are not clear, concise

and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112,

first paragraph. Examples of some unclear, inexact or verbose terms used in the specification

are: on page 2, line 10, "the number of requesting the retransmission request" should be "the

number of retransmission requests" and on page 2, line 12, "the packet can be stayed in the

buffer" should be "the packet can stay in the buffer".

Claim Objections

5.   Claim 1 is objected to because of the following informalities: in line 1, "transmitting

data" should be "transmitting a packet" since the claim is directed to forming a packet for

transmission; in line 3, "a packet" should be "said packet"; in line 4, "time in which" should be

"time, wherein the processing time is the time at which"; in line 5, "apparatus to" should be

"apparatus, to"; in line 5, "said transmitting data" should be "data"; in line 7, "count" should be

"track" since a clock tracks time; in line 8, "memorize" should be "store" since a memory stores

information; in line 9, "time in which" should be "time, wherein the packet transmission time is

the time in which" to clarify that it is the packet transmission time that is the time in which the

packet travels; in line 9, "packet is arrived" should be "packet travels"; in line 12, "request"

should be "requests"; and in line 16, "where" should be "when". Appropriate correction is

required.

6.   Claim 2 is objected to because of the following informalities: in lines 3-4, "than

subtracting" should be "than a subtracting" and in line 4, "time obtained" should be "time,

wherein said subtracting time is obtained". Appropriate correction is required.

7.   Claim 4 is objected to because of the following informalities: in line 1, "furthermore"

should be "further". Appropriate correction is required.

8.   Claim 6 is objected to because of the following informalities: in line 1, "transmitting

data" should be "transmitting a packet" since the claim is directed to forming a packet for

transmission; in line 3, "a packet" should be "said packet"; in line 3, "time in which" should be

"time, wherein the processing time is the time at which"; in line 4, "apparatus to" should be

"apparatus, to"; in lines 4-5, "said transmitting data" should be "data"; in line 6, "transmitting

said packet" should be "transmitting a packet from a transmitter" since "a transmitter" is needed

in line 10, as outlined below; in line 7, "counting" should be "tracking" since a clock tracks time;

in line 8, "request of said" should be "request for said"; in line 10, "instructing to retransmit"

should be "instructing the transmitter to retransmit" to clarify what is being instructed; in line 11,

"said packet" should be "a packet"; in lines 11-12, "time in which" should be "time, wherein the

packet transmission time is the time in which" to clarify that it is the packet transmission time

that is the time in which the packet travels; in line 12, "packet is arrived" should be "packet

travels"; in line 12, "where" should be "when"; and in line 13, "request" should be "requests".

Appropriate correction is required.

9.   Claim 7 is objected to because of the following informalities: in line 1, "receiving data"

should be "receiving a packet"; in line 3, "receive a packet" should be "receive said packet"; in

line 4, "which is obtained" should be "wherein the packet is formed in the transmitting

apparatus"; in line 6, "to said transmitting data" should be "to data"; in line 7, "count" should be

"track"; in line 11, "time in which" should be "time, wherein the remaining time is the time in

which"; in line 11, "is outputted from" should be "is held in" since the packet is outputted from

the buffer at the processing time; in lines 11-12, "portion based" should be "portion, based"; in

line 14, "packet to" should be "packet from"; in line 15, "until" should be "before"; in line 15,

"time which reaches" should be "time reaches"; and in line 16, "where" should be "at which

point". Appropriate correction is required.

10.   Claim 8 is objected to because of the following informalities: in line 1, "furthermore"

should be "further"; in line 4, "where" should be "when"; in line 5, "cease from transmitting"

should be "ceases to transmit"; and in line 6, "where" should be "when". Appropriate correction

is required.

11.   Claim 9 is objected to because of the following informalities: in line 3, "transmitting

data" should be "data". Appropriate correction is required.

12.   Claim 10 is objected to because of the following informalities: in line 2, "packet is data"

should be "packet contains data". Appropriate correction is required.

Claim Rejections - 35 USC § 102

13.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

14.   Claim 7 is rejected under 35 U.S.C. 102(e) as being anticipated by Reme et al. (USPN 6,922,805).

15.   Regarding claim 7, Reme discloses a receiving apparatus for receiving data which is transmitted from a transmitting apparatus, comprising: a receiving portion configured to receive a packet transmitted from said transmitting apparatus, which is obtained by adding a processing time in which said packet is processed at said receiving apparatus to said transmitting data (col. 1, lines 1-13, where the receiver comprises means for receiving packets transmitted by a transmitter, where the packets contain an indication of packet processing time, see also col. 3, lines 29-39 and col. 3, lines 51-62); a timer portion configured to count a current time (col. 3, lines 32-39, where the receiver has a time reference which keeps track of a current time); a buffer portion configured to hold said packet until said processing time (col. 3, lines 32-39, where the receiver must store the packets until they are processed); a calculating portion configured to calculate a remaining time in which said packet is outputted from said buffer portion based on said processing time and said current time (col. 3, lines 32-39, where the receiver determines when the packet must be processed so that it must track the time remaining until the packet is to be processed to ensure the packet is processed on time); and a transmitting portion configured to transmit a request signal which requests a retransmission of said packet to said transmitting

apparatus until said remaining time which reaches a predetermined value where a receive error of

said packet occurs (col. 1, lines 39-48, where the receiver determines if there is sufficient time

remaining to request a retransmission).

Claim Rejections - 35 USC § 103

16.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

17.   Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reme et al.

(USPN 6,922,805) in view of Zhang et al. (USPN 7,032,153).

18.   Regarding claims 1 and 6, Reme discloses a transmitting apparatus and method for

transmitting data to a receiving apparatus, comprising: a generating portion configured to

generate a packet by adding a processing time in which said packet is processed at said receiving

apparatus to said transmitting data (col. 1, lines 1-13, where the transmitter comprises means for

transmitting packets that contain an indication of packet processing time, see also col. 3, lines

29-39 and col. 3, lines 51-62); a transmitting portion configured to transmit said packet (col. 1,

lines 1-13, where the transmitter comprises means for transmitting packets, see also col. 3, lines

29-39); a device for receiving an indication of a current time (col. 2, lines 17-20, where the

transmitter receives an indication of the processing time of a packet being processed at the time

of retransmission, i.e. a "current time," see also col. 4, lines 23-25); a memory portion

configured to memorize a packet transmission time in which said packet is arrived from said

transmitting portion to said receiving apparatus (col. 4, lines 44-53, where the transmitter stores

an estimate of half of the round-trip time, i.e. a packet transmission time); a receiving portion

configured to receive a request signal from said receiving apparatus, which request a

retransmission of said packet (col. 4, lines 32-33, where the transmitter receives a request for

retransmission); and an instructing portion configured to instruct said transmitting portion to

retransmit said packet based on said current time, said processing time and said packet

transmission time, where said request signal is received (col. 4, lines 44-53, where the transmitter

retransmits a packet based on processing time indication in the request, i.e. the current time, the

processing time of the packet to be retransmitted, i.e. the processing time, and half of the

estimate of the round-trip time, i.e. the packet transmission time).

Reme does not expressly disclose a timer portion configured to count a current time,

where the current time is used to determine whether a retransmission should be send. Rather,

Reme discloses that the current time is received in the retransmission request (col. 4, lines 22-25)

where this is presumably done because the transmitter and the receiver do not have a common

time reference (col. 3, lines 34-39). Zhang teaches, in a system handling retransmission requests,

determining the number of possible retransmissions based on current system time and the

packet's finish time (col. 4, lines 50-56). It is implicit that this system obviates the need to

transmit the current processing time with the retransmission request, thereby conserving

bandwidth. Therefore, it would have been obvious to one of ordinary skill in the art at the time

of the invention to configure a timer portion in the transmitter to count a current time to permit

the system of Reme to determine whether a retransmission is possible in a way that obviates the

need to transmit the current processing time with the retransmission request, thereby conserving

bandwidth.

19.   Regarding claim 2, Reme in view of Zhang discloses that said instructing portion

instructs said transmitting portion to retransmit said packet where said current time is earlier than

subtracting time obtained by subtracting said packet transmission time from said processing time

(Reme: col. 4, lines 47-53, see also Zhang: col. 4, lines 50-56).

20.   Regarding claim 3, Reme in view of Zhang discloses that said instructing portion

instructs said transmitting portion not to retransmit said packet where said current time is later

than said subtracting time (Reme: col. 4, lines 47-53, see also Zhang: col. 4, lines 50-56).

21.   Regarding claim 4, Reme in view of Zhang discloses a calculating portion configured to

calculate said packet transmission time based on a transmitting time in which a test packet is

transmitted and a receiving time in which a return packet corresponding to said test packet is

received (Reme: col. 4, lines 47-53, where the transmission time is determined based on an

estimate of the round trip time, i.e. "based on a transmitting time in which a test packet is

transmitted and a receiving time in which a return packet corresponding to said test packet is

received").

22.   Regarding claim 5, Reme in view of Zhang discloses that said calculating portion

calculates a maximum number of retransmission of said packet based on said transmitting time

and said receiving time (Zhang: col. 4, lines 40-46, where the system determines the total

number of available retransmissions, i.e. "a maximum number of retransmissions").

23.   Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reme et al. (USPN

6,922,805).

24.   Regarding claim 8, Reme discloses a checking portion configured to check said packet

where said receive error of said packet occurs (col. 3, line 65-col. 4, line 2, where only "the most

important packets" are eligible for a retransmission request); wherein said transmitting portion

cease from transmitting said request signal where said packet is invalid (col. 3, line 65-col. 4,

line 2, where only "the most important packets" are eligible for a retransmission request, such

that no retransmission request is sent if the packet is not a "most important packet").

Reme does not expressly disclose that the checking portion checks a header of said

packet. Examiner takes official notice that it was well known in the art at the time of the

invention to check the header of a packet to determine the packet's type because the header

contains information regarding the packet type. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention to have the checking portion check a header

of the packet since the header contains information pertaining to the type of the packet.

25.   Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reme et

al. (USPN 6,922,805) as applied to claim 8 above, and further in view of Robles et al. (USPN

6,282,172).

26.   Regarding claim 9, Reme does not expressly disclose that the invalid packet is data which

is not required to reconstruct said transmitting data. Rather, Reme only discloses that the invalid

packet is not a "most important packet" (col. 3, line 65-col. 4, line 2). Robles discloses, in an

MPEG system, using null data packets to ensure proper timing in the system (col. 15, lines 35-

43). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to have the invalid packet include data which is not required to reconstruct said

transmitted data so that bandwidth of the system is not wasted requesting retransmissions of

packets that do not carry useful information.

27.   Regarding claim 10, Reme in view of Robles discloses that said invalid packet is data

which is null data (Robles: col. 15, lines 35-43, where the invalid packets are filled with null

data).

Conclusion

28.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. Zhu et al. (USPN 5,768,527) see entire document, which pertains to a system for

avoiding the useless retransmission of packets. Ido et al. (US 2002/0154600) see entire

document, which pertains to a system for avoiding the useless retransmission of packets. Kohno

(US 2003/0120802) see entire document, which pertains to a system for avoiding the useless

retransmission of packets.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The

examiner can normally be reached on Mon.-Fri. 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daniel J. Ryman
Examiner
Art Unit 2616